THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DEWEY T. HOLLAND

Appeal No. 96-3833
Application 08/014,320[1]

HEARD: June 11, 1997

Before McCANDLISH, Senior Administrative Patent Judge, and COHEN AND LYDDANE, Administrative Patent Judges.

McCANDLISH, Senior Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's rejection of claims 32 through 37 and 39 under 35 U.S.C. § 103. All of the other claims in the application have either been canceled or have been withdrawn from consideration as being directed to a non-elected invention.

[1] Application for patent filed February 5, 1993.

Appellant's invention relates to a wiper blade assembly having a wiper blade (20) heated by a heating element (70). According to appealed claim 32, the heating element comprises a material (75) disposed between a pair of elongated conductive members (72, 74) and possessing a positive temperature coefficient of resistance (PTC).[2]

A copy of the appealed claims, as these claims appear in the appendix to the examiner's answer, is appended to this decision.[3]

In rejecting the appealed claims, the examiner relies upon the following references:

Kampe	4,334,148	Jun. 8, 1982
VanSickle	4,603,451	Aug. 5, 1986
Bronnvall	4,629,869	Dec. 16, 1986

The following references are applied by this Board in support of new grounds of rejection set forth *infra* pursuant to the provisions of 37 CFR § 1.196(b):

Waseleski, Jr. (Waseleski)	3,489,884	Dec. 28, 1966[4]

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[2] As is well known in the prior art, the electrical resistance of a PTC material increases to a high value upon heating the material to a critical temperature, thereby correspondingly reducing the flow of electrical current through the material to effectively turn off the heater. Heaters embodying this type of material are typically referred to in the prior art as self-regulating heaters because they eliminate the need for a thermostatic control.

[3] As correctly pointed out by the examiner on page 3 of the answer, the copy of claims 32, 35, and 39 appended to appellant's brief is incorrect.

[4] We have not attached a copy of this reference to this decision because it was applied by the examiner in his examination of appellant's application and because it was cited by appellant in his specification.

Horsma et al. (Horsma) 4,543,474 Sep. 24, 1985[5]

Claims 32 through 34 stand rejected under 35 U.S.C. § 103 as being unpatentable over VanSickle in view of Kampe, and claims 35 through 37 and 39 stand rejected under 35 U.S.C. § 103 as being unpatentable over VanSickle in view of Bronnvall.

With regard to the rejection of claims 32 through 34, the examiner concludes that it would have been obvious to substitute a PTC strip heating element as taught by Kampe for the thermostatically controlled resistance strip heating element in VanSickle's heated wiper blade assembly. With regard to the rejection of claims 35 through 37 and 39, the examiner concludes that it would have been obvious to substitute an elongated plate-shaped PTC strip heating element as taught by Bronnvall for the thermostatically controlled resistance strip heating element of VanSickle.

In arguing the patentability of claims 32 through 34 as a group, appellant contends on page 6 of the brief that VanSickle does not disclose a PTC type heater. Appellant further contends on pages 6-8 of the brief that VanSickle teaches away from his invention because the patentee's element 34 is a "layer" (brief,

[5] A copy of this reference also is not attached to this decision. This reference was cited in the PTO Form 892 attached to the office action dated April 24, 1995 (Paper No. 13).

page 7) inserted between the patentee's heating element 40 and the patentee's wiper blade so that the patentee's heating element does not contact the wiper blade as required by claim 32. Appellant further argues on page 9 of the brief that the examiner's conclusion of obviousness as set forth *supra* is based on impermissible hindsight.

In arguing the patentability of claims 35 through 37 and 39 as a group, appellant contends on page 10 of the brief that the examiner's rejection of these claims is improper for the same reasons as those set forth with regard to the rejection of claims 32 through 34. Appellant particularly emphasizes that the examiner's proposed combination of VanSickle and Bronnvall is based on hindsight derived from appellant's disclosure.

Reference is made to appellant's brief for further details of his arguments supporting patentability of the appealed claims and to the examiner's answer for further details of his rejections. Inasmuch as appellant has not disputed the examiner's statement on page 2 of the answer that claims 32 through 34 stand or fall together and that claims 35 through 37 and 39 also stand or fall together, we will select a representative claim from each of these two groups, with the result that the remaining claims in each group shall stand or fall with the representative claim. See 37 CFR § 1.192(c)(7) as

amended effective April 21, 1995. *See also In re Young*, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and *In re Wood*, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978). In particular, we will select claim 32 as the representative claim for the group of claims 32 through 34 and claim 35 as the representative claim for the group of claims 35 through 37 and 39.

We have carefully considered the issues raised in this appeal together with the examiner's remarks and appellant's arguments, including those outlined *supra*. As a result, we conclude that the rejections of the appealed claims are sustainable.

Considering first the rejection of claim 32, we agree with the following findings made by the examiner with regard to the VanSickle patent:

> The patent to VanSickle discloses . . . a wiper blade assembly (fig. 2) having an elongated wiper blade (18) with first and second ends and an attachment member (32) for engaging said blade to a support frame. The attachment member is positioned over an upper surface of said blade and captures an elongated heating element (40) between itself and the blade. Said heating element extends the length of the support (32) and receives power from a power source (42) via electrical leads or connectors (46). VanSickle also discloses a temperature responsive means or control means (54) to control the temperature of the heating element.
>
> The patent to VanSickle discloses all of the above recited subject matter with the exception of the

> heating element having a pair of spaced apart elongated conductive members extending parallel to the blade and a PTC material disposed between said conductive members. [Answer, page 4.]

We also agree the examiner's following analysis of the VanSickle patent:

> It is not clear how or why Appellant considers 34 to be an insulating member when VanSickle clearly states [Column 3, 10-13] "The backing support 32 forms a channel with inwardly extending **projections 34** which support and retain the **wiper blade 18."**. There is no "insulating" member 34, but rather a wiper blade 18, which appears to have an upper stiffening portion or layer, receiving projections **34** of the backing support 32. VanSickle clearly and unarguably sets forth that the backing support engages the wiper blade.
>
> In view of the above, Appellant's arguments that VanSickle teaches away from Appellant's invention since VanSickle teaches an insulating layer between the heating element and the wiper blade are not persuasive. **No** such layer is taught by VanSickle. While it is true that the upper portion of wiper blade 18 of VanSickle may be of a different material than the lower portion, as illustrated by the different cross hatching (fig. 3), it is the portions together that make up or constitute the wiper blade. This interpretation is reinforced by VanSickle who states that the projections 34 support and retain the wiper blade. Just because the upper portion of the blade is of a different material than the lower portion does not mean it is not part of the blade.

Contrary to appellant's arguments spanning pages 6 through 8 of the brief, the VanSickle specification unequivocally describes elements 34 as being the inwardly extending projections of the wiper blade attachment member or backing support, as VanSickle

calls it. See column 3, lines 10-13 of the VanSickle specification. At the oral hearing, appellant's counsel was understood to agree with the examiner's finding regarding VanSickle's elements 34.

It is evident that the backing strip lying between VanSickle's windshield-engaging blade portion and heating element 40 is part of blade 18 itself because, as the examiner noted, the patentee's specification states in column 3, lines 22-25, that the "blade 18 would be secured to the supporting assembly 20 *by sliding the blade 18 through the channel formed by the projections 34*" (emphasis added). Since the only structure shown to lie in the channel formed by projections 34 is this backing strip, then the description that the blade 18 is in the channel signifies that the backing strip must be part of the blade 18. Furthermore, this strip portion of the blade is shown to lie in contact with the attachment member 32. Based on these findings, claim 32 does not distinguish from VanSickle by reciting that the heating element is in physical contact with the blade and the attachment member.

Also without merit is appellant's argument on page 7 of the brief that the backing strip portion of the blade must be an insulating layer to "insulate the heating element from the wiper

blade" because it is "cross-hatched differently." In the first place, none of the appealed claims is drafted in such a way to exclude the formation of an "insulating layer" on the windshield-engaging portion of the wiper blade, and the blade itself is not recited in any of the appealed claims to be a one-piece structure to distinguish from VanSickle's two-piece blade.

Furthermore, the backing strip blade portion is not cross-hatched in the manner usually indicative of insulation. In any event, those of ordinary skill in the art would certainly have recognized that to impose a thermal insulation between the windshield-engaging portion of the wiper blade and the heater, which is the fair implication of appellant's argument, would be counterproductive to the purpose of the heater, namely to heat the wiper blade.

In view of the foregoing, we agree with the examiner that claim 32 distinguishes from VanSickle's heated wiper blade assembly only by reciting that the heating element has a pair of spaced apart elongated conductive members and a PTC material disposed between the conductive members.

We also agree with the following findings made by the examiner with respect to the Kampe patent:

> The patent to Kampe discloses an elongated, flexible strip heating element (see [the sole] fig.) that is comprised of a pair of parallel, elongated

> conductive members (12) with an elongated PTC material disposed between and in contact with said conductive members such that electrical power supplied to said conductive members creates heat along the length of the strip heater. Use of PTC material makes the heater self-regulating. (Examiner' Answer, page 5.]

Appellant does not appear to take issue with the examiner's findings as quoted *supra*. In fact, with the possible exception of the insulation sleeve 16 on Kampe's PTC heating element, appellant does not argue that the patentee's heating element differs from the heating element recited in appealed claim 32. Instead, as set forth on page 9 of the brief, appellant's main position is that Kampe does not mention or somehow suggest the application of his PTC heating element to heat a wiper blade. This argument must fail.

Contrary to the implications of appellant's argument as outlined *supra*, there is no requirement in the test for obviousness under § 103 that the suggestion for making a modification be expressly articulated in the prior art. *In re Sernaker*, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983); *Cable Electric Products, Inc. v. Genmark, Inc.,* 770 F.2d 1015, 1025, 226 USPQ 881, 886 (Fed. Cir. 1985). Instead, it is sufficient that the prior art contain some teaching or suggestion that would have led one of ordinary skill in the art to make the

modification required by the claims. *In re Lalu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984).

In the present case, the Kampe patent teaches that the PTC heating element is self-regulating in the sense that the electrical resistance of the PTC material increases substantially upon reaching a critical temperature to effectively turn off the heating element. Self-regulating PTC heating elements are known in the prior art to have the advantage over conventional heaters of the type disclosed in the VanSickle patent in that they eliminate the need for a separate thermostatic control.

Inasmuch as the advantages and disadvantages of a PTC heating element and a heating element with a separate thermostatic control are well known, the selection of one or the other for a particular installation would have been merely a matter of choice or engineering design. *See In re Heinrich*, 268 F.2d 753, 756, 122 USPQ 388, 390 (CCPA 1959). Certainly, the elimination of the need for a separate thermostatic control would have been ample motivation for one of ordinary skill in the art to replace VanSickle's thermostatically controlled heating element with Kampe's PTC heating element. It therefore would have been obvious without recourse to appellant's disclosure to

substitute Kampe's PTC heating element for VanSickle's thermostatically controlled heating element. *Id.*

We are not unmindful of appellant's argument (see page 9 of the brief) that Kampe teaches away from making the modification needed to arrive at the claimed invention because Kampe discloses an insulating layer 16 enveloping the electrodes and the PTC material. This argument is also unpersuasive.

In the first place, claim 32 is not drafted in such a way to exclude Kampe's insulating layer 16 because it calls for the heating element as "having" certain elements and therefore is "open-ended" in the sense that the heating element may include other elements not recited in the claim. Furthermore, contrary to the apparent implication of appellant's argument, Kampe's layer or sleeve 16 appears to be electrical insulation, not thermal insulation inasmuch as enveloping the heater in thermal insulation would be counterproductive to the basic purpose of the heater, namely the supply heat to the surroundings.

In any case, one skilled in the art is not compelled to blindly adopt every aspect of the prior art teachings without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889, 221 USPQ 1025, 1032 (Fed. Cir.

1984). Skill in the art is presumed, not the converse. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

We will therefore sustain the examiner's § 103 rejection of claim 32. We will also sustain the § 103 rejection of claims 33 and 34 since, as noted *supra*, claims 33 and 34 stand or fall with claim 32.

With regard to the rejection of claims 35 through 37 and 39, the examiner relies upon the Bronnvall patent for a suggestion of a PTC heating element corresponding to appellant's claimed heating element to eliminate the need for a separate temperature control. He makes that following undisputed findings regarding this reference:

> The patent to Bronnvall discloses an elongated, flexible strip (cable) heating element **(see fig. 2)** that is comprised of a pair of parallel, elongated, flat conductive members (1) with an elongated PTC material (4) disposed between and in contact with said conductive members such that electrical power supplied to said conductive members creates heat along the length of the strip heater. Use of PTC material makes the heater self-regulating. The patent to Bronnvall also discloses the heating element including an outer insulating layer (3).

In arguing the patentability of claims 35 though 37 and 39 as a group, appellant contends, *inter alia*, that Bronnvall does not suggest the modification proposed by the examiner. Appellant goes on to argue that even if the modification were suggested,

> [O]ne still would have a heating element which is not in contact with the wiper blade. In addition to the insulating layer 34 of VanSickle, which would separate the Bronnvall device from the wiper blade 18 of VanSickle, there is the additional insulating material 3 of Bronnvall preventing contact between the heating element and the wiper blade. [Brief, page 12.]

Appellant's arguments as quoted *supra* are unpersuasive. Unlike claim 32, claim 35 does not require the heating element to be in physical contact with the blade. Instead, this claim merely recites the heating element is maintained between, and hence, not necessarily in contact with, the blade and the attachment member. As far as claim 35 is concerned, therefore, the feature of contacting the blade with the heating element is not claimed, and it is well established patent law that features not claimed, such as the one discussed above, may not be relied upon to support patentability. *See In re Self*, 671 F.2d 1344, 1348, 213 USPQ 1, 5 (CCPA 1982) and *In re Richards*, 187 F.2d 643, 645, 89 USPQ 64, 66 (CCPA 1951).

In any event, VanSickle's heating element does contact a portion of the blade according to our findings concerning claim 32. Based on the foregoing findings, the only difference between VanSickle and the subject matter of claim 35 resides in the particular construction of the heating element as discussed *supra*.

As for appellant's remarks regarding the Bronnvall patent, the insulating layer 3 in the embodiment of the patentee's Figure 2 is part of the heating element itself as correctly pointed out by the examiner. Contrary to the implication that might be drawn from appellant's arguments, Bronnvall's insulating layer 3 is obviously electrical installation, not thermal insulation.

In any case, as noted *supra*, one skilled in the art is not compelled to blindly adopt every aspect of the prior art teachings without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d at 889, 221 USPQ at 1032. Skill in the art is presumed, not the converse. *In re Sovish*, 769 F.2d at 743, 226 USPQ at 774.

Appellant's additional arguments regarding the Bronnvall patent as set forth on page 11 of the brief are also unpersuasive. It is of no moment that Bronnvall lacks a teaching of capturing the heating element between an attachment member and a wiper blade, and it also is of no moment that Bronnvall lacks a teaching of a support frame for the blade's attachment member because, VanSickle, not Bronnvall, is relied upon for a teaching of these features. Appellant cannot show non-obviousness by attacking the references individually without regard to what the

applied references collectively suggest. *In re Keller*, 642 F.2d 413, 426, 208 USPQ 871, 882 (CCPA 1981).

Admittedly, Bronnvall, like Kampe, does not mention a wiper blade or expressly suggest the application of his PTC heating element to heat a wiper blade. However, as noted *supra*, there is no requirement in the test for obviousness under § 103 that the suggestion for making a modification be expressly articulated in the prior art. *In re Sernaker*, 702 F.2d at 995, 217 USPQ at 6; *Cable Electric Products, Inc. v. Genmark, Inc.,* 770 F.2d at 1025, 226 USPQ at 886. Instead, it is sufficient that the prior art contain some teaching or suggestion that would have led one of ordinary skill in the art to make the modification required by the claims. *In re Lalu*, 747 F.2d at 705, 223 USPQ at 1258.

In the present case, Bronnvall recognizes in column 1, lines 12-17, that the output of a PTC heating element is advantageously self-regulating without the need of a separate thermostatic control. Such a teaching alone would have been ample motivation for one of ordinary skill in the art to substitute Bronnvall's PTC heating element for VanSickle's thermostatically controlled heating element. Furthermore, as noted *supra*, the advantages and disadvantages of a PTC heater and

a heater with a separate thermostatic control are well known, making the selection of one or the other for a particular installation a matter of choice or engineering design. *See In re Heinrich*, 268 F.2d at 756, 122 USPQ at 390.

Accordingly, we will sustain the examiner's § 103 rejection of claim 35. We will also sustain the examiner's rejection of claims 36, 37 and 39 since, as noted *supra*, these claims stand or fall with claim 35.

In sustaining the examiner's rejections of the appealed claims, we are not mindful of appellant's arguments regarding long felt need as set forth on page 12 of the brief. However, there is no evidence, such as a declaration or affidavit, to support these arguments, and it is well settled that arguments of counsel cannot take the place of evidence. *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

We also are not unmindful of a colored photograph found in the file and depicting what appears to be a comparison between a "factory original blade" and a "heated wiper blade." However,

there is no evidence establishing that the heated blade incorporates appellant's invention; nor is there any sworn statement pertaining to any tests that may have been conducted. In any case, any comparative testing must be done with the closet prior art. *In re DeBlauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

Under the provisions of 37 CFR 1.196(b), the following new grounds of rejection are entered against the appealed claims:

Claims 32, 33, 35 through 37 and 39 are rejected under 35 U.S.C. § 103 as being unpatentable over VanSickle in view of Bronnvall and Waseleski, and claim 34 is rejected under 35 U.S.C. § 103 as being unpatentable over VanSickle in view of Bronnvall, Waseleski and Horsma.

Based on the findings set forth *supra*, the only difference between the subject matter of the appealed claims and the VanSickle patent resides in the claimed details of the heating element for the wiper blade. However, according to our findings set forth *supra*, Bronnvall teaches a PTC heating element corresponding to the heating element recited in claims 32, 33, 35 through 37 and 39.

Furthermore, as pointed out *supra*, Bronnvall recognizes in column 1, lines 12-17, that the output of a PTC heating element

is advantageously self-regulating without the need of a separate thermostatic control.[6] Such a teaching alone would have been ample motivation for one of ordinary skill in the art to substitute Bronnvall's PTC heating element for VanSickle's thermostatically controlled heating element. Additionally, as also noted *supra*, the advantages and disadvantages of a PTC heater and a heater with a separate thermostatic control, such as VanSickle's heater are well known, making the selection of one or the other for a particular installation a matter of choice or engineering design. *See In re Heinrich*, 268 F.2d at 756, 122 USPQ at 390.

The Waseleski patent expressly teaches the provision of a self-regulating PTC strip heating element 3 for heating a wiper blade. This patent, it should be noted, is not relied upon for teaching a PTC heating element corresponding to the claimed details of appellant's PTC heating element. Instead, this reference is relied upon for its express suggestion of eliminating the separate thermostatic control in a conventional thermostatically controlled wiper blade heating element by

[6] Since appellant has not expressly stated that the plate-shaped heating element disclosed in his specification (see page 7 thereof) is prior art, but only the plate-shaped heating element is "available through Thermacon, Inc." (specification, page 7), we have not relied upon the Thermacon heating element in support of our rejection.

utilizing a self-regulating PTC type heating element to heat the wiper blade. See column 1, lines 35-39 and lines 45-54 of the Waseleski specification. As such, Waseleski reinforces our earlier determination that it would have obvious to substitute a PTC strip heating element for VanSickle's thermostatically controlled strip heating element to eliminate the need for a separate thermostatic control.

In view of the foregoing, we are satisfied that the combined teachings of VanSickle, Bronnvall and Waseleski would have suggested the subject matter of claims 32, 33, 35 through 37 and 37 to one of ordinary skill in the art to warrant a conclusion of obviousness under the test set forth in *In re Keller*, 642 F.2d at 425, 208 USPQ at 881.

With regard to claim 34, appellant has not disputed the examiner's finding that Bronnvall's PTC strip heating element is flexible. In any event, Horsma teaches the concept of making a PTC strip heating element flexible so that the heating element is capable of conforming to the contour of the structure to be heated (see the paragraph bridging columns 3 and 4 of the Horsma specification). For these reasons it would have been obvious to make the PTC heating element flexible. Horsma is also pertinent for its teaching that PTC heating elements are self-regulating to

eliminate the need for a separate thermostatic control (see, for example, column 3, lines 12-15 of the Horsma specification).

In summary, the examiner's decision rejecting appealed claims 32 through 37 and 39 is affirmed, and new grounds of rejection have been entered against the appealed claims under the provisions of 37 CFR § 1.196(b).

Any request for reconsideration or modification of this decision by the Board of Patent Appeals and Interferences based upon the same record must be filed within one month from the date hereof. 37 CFR § 1.197.

With respect to the new rejections under 37 CFR § 1.196(b), should appellant elect the alternate option under that rule to prosecute further before the Primary Examiner by way of amendment or showing of facts, or both, not previously of record, a shortened statutory period for making such response is hereby set to expire two months from the date of this decision. In the event appellant elects this alternate option, in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to us for final action on the affirmed rejection, including any timely request for reconsideration thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR

§ 1.136(a).

AFFIRMED - 37 CFR § 1.196(b)

HARRISON E. McCANDLISH Senior Administrative Patent Judge	)	
IRWIN CHARLES COHEN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
WILLIAM E. LYDDANE Administrative Patent Judge	)	

Appeal No. 96-3833
Application 08/014,320

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APPENDIX

32. A wiper blade assembly capable of being heated and operating at a substantially constant temperature, said blade assembly comprising:

an elongated wiper blade having an attachment member connected thereto; and

an elongated heating element contacting said blade and extending substantially parallel to said blade along the length of said blade, said heating element having (a) a pair of spaced apart, elongated conductive members extending parallel to and substantially the length of said blade and (b) a material with a positive temperature coefficient of resistance disposed between and in electrical contact with said conductive members along the length of said blade;

wherein said attachment member is positioned over an upper surface of said blade and captures said heating element between itself and said blade.

33. The wiper blade assembly of claim 32, which also includes means for supplying electricity to said conductive members.

34. The wiper blade assembly of claim 32, wherein the heating element is flexible.

35. A wiper blade assembly comprising:

an elongated blade of predetermined length with first and second ends and an attachment member for engaging said blade to a support frame; and

an elongated heating element positioned substantially parallel to said blade, the heating element having (a) first and second spaced apart, elongated conductive members extending parallel to and substantially the length of said blade and (b) a material with a positive temperature coefficient of resistance disposed between and in electrical contact with said conductive members thereby providing substantially constant distribution of heat along the length of said blade when heating said wiper blade;

wherein said attachment member is positioned over an upper surface of said blade and maintains said heating element between itself and said blade.

36. The wiper blade assembly of claim 35, wherein the heating element also includes first and second connectors, said first connector being in electrical communication with said first

conductive member and said second connector being in electrical communication with said second conductive member, said connectors projecting beyond an end of said blade.

37. The wiper blade assembly of claim 36, which also includes means for supplying electricity to said electric connectors at an end of said blade.

38. The wiper blade assembly of claim 35, wherein the heating element is flexible.

39. A heated wiper blade comprising:

an elongated blade of predetermined length having means for retaining said blade in a desired position;

an elongated heating element contacting said blade along the length of said blade, said heating element having (a) a pair of spaced apart, elongated conductive members extending parallel to and substantially the length of said blade and (b) a material with a positive temperature coefficient of resistance between and in electrical contact with said conductive members; and

means for supplying electricity to said conductive members;

wherein said heating element is maintained in contact with the upper surface of said blade by said means for retaining said heating element between itself and said blade.